Adobe® Photoshop CS
Introduction and Intermediate

A Workshop for San Diego State University Faculty & Staff

© 2004. San Diego State University. All Rights Reserved
Sponsored by Academic Affairs

Where to Find Help When You Need It

Help from your Division/College's Computer Consultant

Some divisions and colleges have computer consultants assigned to them. You can contact these consultants when you need help. To determine if you have a consultant assigned to your division or college, look to: http://rohan.sdsu.edu/~facstaff

Help from the BATS Web Page

BATS (Baseline Access, Training and Support) is a California State University initiative to provide all students, faculty, and staff with "baseline" access to information resources via networks, training in the uses of baseline hardware and software systems, and ongoing professional and technical support for utilization of computer resources at San Diego State University. You can access the BATS Web Page by pointing your browser to: **http://rohan.sdsu.edu/~bats/**

Help in the San Diego State University, Faculty Room

The Faculty Room is staffed Monday through Friday with computing consultants who will try to answer your questions.

Location: Adams Humanities, 1109
Phone Number: x45727
Semester Hours: 7:30am – 6:00pm Monday -Thursday
7:30am – 4:30pm Friday
Semester Intersession: 7:30am – 4:30pm Monday – Friday

Help from the Faculty Computing Help Line

Phone Number: x41348 **E-mail:** helpline@mail.sdsu.edu
Semester Hours: 7:30am – 6:00pm Monday – Thursday
7:30am – 4:30pm Friday
Semester Intersession: 7:30am – 4:30pm Monday – Friday

Help from the Staff Computing Help Line

Phone Number: x40824 **E-mail:** staffhelp@sdsu.edu
Semester Hours: 7:30am – 6:00pm Monday – Thursday
7:30am – 4:30pm Friday
Semester Intersession: 7:30am – 4:30pm Monday – Friday

Help in the User's Manual

You can also use the User's Manual that came with your software to help you answer questions and find solutions to problems.

Online Help

Photoshop's online help is very extensive with a through index and many detailed examples. Select Help Contents from the Help menu.

Other Resources

Web sites

http://studio.adobe.com/tips/main.jsp

Books

Photoshop for Dummies by Deke McClelland
Easy Adobe Photoshop by Kate Binder
The Complete Idiot's Guide to Adobe Photoshop by Robert Stanley
The Photoshop WOW book by Jack Davis et al. (for advanced users)

Table of Contents

Improving Image Quality **1**
Steps to Making Improvements 1
Adjust Contrast and Brightness 1
Auto levels 1
Levels 2
Correct Colors 2
Variations 2
Trim 3
Crop 3
Image Size 3
Canvas Size 4
Orient 4
Repair 4
Clone Stamp 4
Sharpen 5
Unsharp Mask 5

The Marquee Tool **6**
Selecting a rectangular region 6
Selecting a circular region 6
Selecting a single row or column 7
Selecting free-form areas 7
Selecting contiguous areas of color 7
Selecting non-contiguous areas of color 7
Adjusting selections 7
Moving selections 7
Inverting Selections 8

Painting Tools **8**
Paintbrush and Pencil 8
Shape Menu 8
Paint bucket 8
Eraser 8
Color Tools 8
Picking a different color 8
Fill and Stroke 9

Adding Text to an Image **9**
Typing Text 9
Type Tools 9

Working with Layers **10**
Layers Palette 10
Showing and hiding layers 10
Choosing a layer 10
Linking layers 10
Creating a new layer 10
Naming a layer 10
Deleting a layer 10
Duplicating a layer 10
Moving layer contents 10
Rearranging layers 10
Converting the Background to a layer 10

Aligning layers 11
Merging layers 11
Changing layer opacity 11
Flattening layers 11
Copying a layer between documents 11
Preserving Transparency 11
Saving a Layered Image 11
Exporting a Layered Image 11
Using Layer Styles 11
Adding a Drop Shadow 11
Applying Bevel and Emboss 11
Applying other Layer Styles 11
Adjustment Layers 11

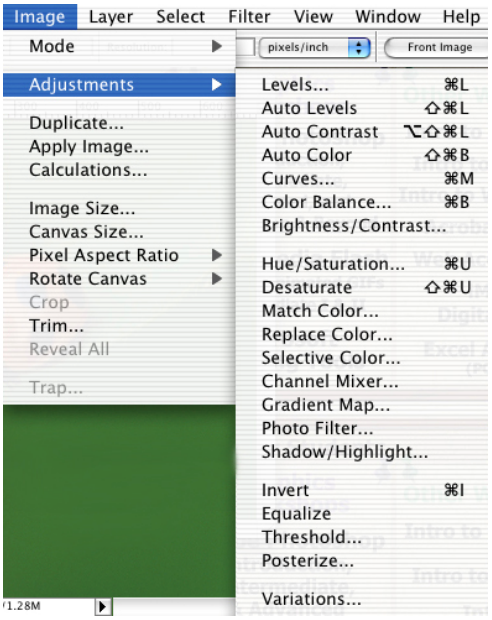
File Formats 12
Photoshop (native format) 12
BMP 12
CompuServe GIF 12
Photoshop EPS 12
JPEG 12
PICT 12
TIFF 12

Creating Images for the Web 13
GIF vs. JPEG 13
Rule of thumb 13
Exceptions to the rule 13
Saving as JPEG 13
Saving as GIF 13
Compuserve GIF 13
Web-Safe colors 13

Making Mistakes and More Photoshop Wisdom 14
Oops, I goofed 14
Undo 14
Revert 14
History Palette 14
Common Mistakes, Problems, and Remedies 14
I can’t save it as a JPEG, TIFF, etc. 14
It won’t let me paint 14
It won’t let me edit 14
My selection won’t feather 14
I can’t paint in color 14
A Word about Modes 14

Improving Image Quality

One of the most common tasks in Photoshop includes improving the quality of images. Most improvements can be made with just a few commands that are outlined below.



Steps to Making Improvements

The basic steps towards better image quality (ACTORS):

1. **A**djust contrast and brightness by adjusting Levels.
2. **C**orrect color with the Variations command.
3. **T**rim the image using Crop, Image Size and Canvas Size.
4. **O**rient using Rotate.
5. **R**epair the image using painting tools and Clone Stamp.
6. **S**harpen the image with Unsharp Mask.

Improving images is definitely more art than science. The steps above will help you get the most out of your images, but they aren't always applied in that order and some steps are sometimes skipped entirely. There is only one absolute rule: *Garbage In, Garbage Out*. Photoshop can sometimes work miracles, but if you start with a very poor image, you'll have a hard time making something good come of it. If you don't see any significant improvement after step 2, you are probably starting with an extremely poor image. Scan it again, or find a better one.

Adjust Contrast and Brightness

You would think that the Brightness and Contrast command under the Image>Adjust menu would be the best choice for this job, but in reality, the Brightness and Contrast command is just plain terrible. To get better results, use the Levels command.

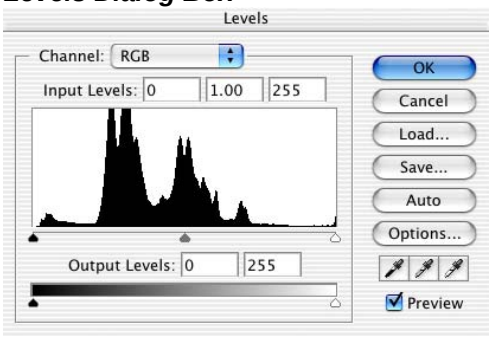
Auto levels

No matter what type of image you have, choose Auto Levels from the Image>Adjust menu to automatically correct the contrast of an image. Auto Levels makes the lightest colors lighter and the darkest colors darker. Sometimes this is all you need. But if you're still not happy, try the Levels command.

Levels

The Levels command lets you adjust the darkest and lightest colors as well as the medium colors. This extra dimension often yields better results than Auto Levels. After you select Levels from the Image menu, you'll see the Levels Dialog Box. It looks complicated, but there are only three things to worry about: the sliders at the bottom of the histogram. The Simplified Levels Dialog Box image on the right shows only the parts that are important to most people. Here's how to use them:

Levels Dialog Box

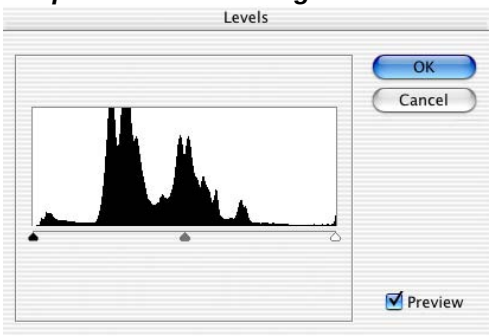


- To make the darkest pixels black, drag the left (black) triangle to the right so that it rests under the beginning of the first hill in the histogram.
- To make the lightest pixels white, drag the right (white) triangle to the right so that it rests under the end of the last hill in the histogram.

Note: If you've already chosen Auto Levels, or clicked the Auto button in the dialog box, you may not have to change the left and right sliders because Auto Levels does this automatically.

- To adjust the medium colors, slide the middle (gray) triangle. Drag it to the right to darken medium colors. Most likely, however, you'll want to make the medium colors lighter, so drag the middle slider to the left until you're happy with how your image looks.
- If you have the Preview option selected, you'll be able to see your changes in real time. When you are happy with how your image looks, click OK.

Simplified Levels Dialog Box



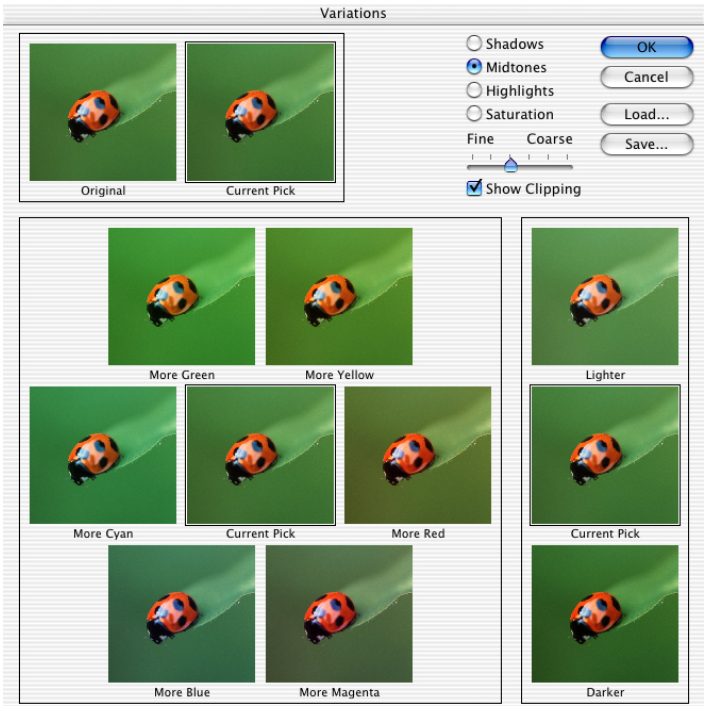
Correct Colors

Variations

The Variations command is a handy way to rid your image of color casts. If your image is too green, too red, or too anything, you can usually correct it with Variations.

To remove color casts:

1. Choose Variations from the Image>Adjust menu.
2. Select the Midtones radio button in the upper-right corner (if it's not already selected) to edit the medium colors in your image. You'll see seven thumbnails of your image in the lower-left that let you shift the image toward a primary color. The Current Pick thumbnail shows what the image looks like after the corrections. The lighter and darker thumbnails on the right aren't as precise as the sliders in the Levels command, so feel free to ignore them.
3. Click the thumbnail that has the color you wish to add. If the image is too red, you'll want to add cyan—its opposite on the color wheel. To add more cyan, click the More Cyan thumbnail. If it's too green, click More Magenta.



You can also vary the amount of color correction by dragging the amount slider in the upper-right toward Fine or Coarse. It usually works fine in the center, but there are times that you need to adjust it. The Shadows and Highlights button lets you edit dark and light colors, respectively. The Saturation button lets you edit the intensity of the colors in your image, which can sometimes be flattened while adjusting Levels. If you decide to adjust shadows, highlights, or saturation, you'll probably have to slide the amount slider towards Fine.

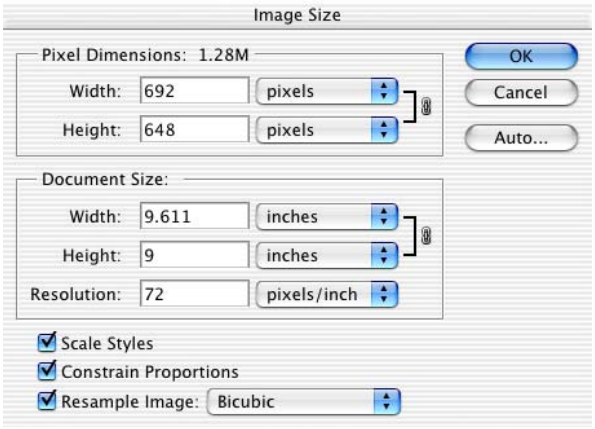
Trim

Crop

To eliminate portions of an image, use the crop tool to draw a box around the part of the image you wish to keep.

1. Select the Crop tool . Or press the 'C' key on your keyboard.
2. Drag the crop tool around the portion of the image you wish to keep. If you don't get it just right, that's OK, you can adjust it in the next step.
3. Adjust the crop tool by dragging the square handles located around the edges of the marquee. The cursor will change to a double-headed arrow indicating that you may drag the handle. If you move the cursor outside the boundary, the cursor changes to a curved double-headed arrow indicating that you can rotate the crop boundary.
4. Double-click inside the boundary to crop the image.
5. Press Esc to get rid of the cropping boundary if you change your mind about cropping.

Image Size



When you want to change the size of your image, select Image Size from the Image menu. Note that you should usually only make your image **smaller**, not larger. Photoshop *can* make your image larger, but it doesn't know what to put into that extra space. So Photoshop *s t r e t c h e s* the image until it fits into the size you specified. During the stretching, your image loses detail and often looks blurry. There are occasions when a slight enlargement has little effect on quality. But in most cases, if you want a larger image, you should scan it at a larger size.

Changing values in the Image Size dialog box can have dramatic and even disastrous effects on your image if you don't know what you are doing. Pixel Dimensions, Print Size and Resolution all work together. Change one of them and at least one of the others must change proportionately.

Resolution is the first value to check and perhaps the most important, even though it appears near the bottom of the dialog box. Resolution refers to the number of pixels that print per inch. The higher the resolution, the more detail your image retains. However, this doesn't mean that all of your images should be 1200 dpi (dots, or pixels, per inch). Unnecessarily high resolutions will waste disk space and make working with the image more difficult because it will take longer to load and longer to complete oprations.

Resolution has the same rule as Image Size: DO NOT increase resolution after the fact. If you want to print a color image at 180 dpi, but it is currently at 72 dpi, increasing the resolution will result in a poor image. Reducing resolution, or downsampling, on the other hand, usually yields acceptable results. All scanning software allows you to set the resolution of your scanned image. If you want a higher resolution, you'll have to scan the image again. For suggestions on what resolution you should use, see the chart at the right. Again, these are only suggestions. Any value between Acceptable and Ideal should work fine.

Resolution Recommendations		
Type of Job	**Ideal**	**Acceptable**
Color or b/w images for multimedia projects, on-screen presentations and web pages	72 dpi	72 dpi
Color or b/w images for laser printing or overheads	180	120
Full-color image for magazine or professional publication	300	225

The **Pixel Dimensions** area is something to worry about if you are creating graphics for use in multimedia projects, on-screen presentations or web pages. If you are only creating graphics for print, you can pretty much ignore this area. The dimensions of a standard monitor are 800 pixels wide and 600 pixels high. So if you want to put a photograph of yourself on a web page, a good size is 250 pixels wide at 72dpi. That would take up slightly more than one-third of a standard screen's width, or about 3.5 inches (250 ÷ 72 = 3.47).

The **Print Size** area shows you how large the image will be if you were to print it. You can change it if you wish, but remember that enlarging the image often downgrades its quality.

The **Constrain Proportions** check box near the bottom will keep everything in proportion if it is checked. So as you change the width, the height will change proportionately, and vice versa. If you want to make your photos look squished or stretched, uncheck the box and you can change each dimension independently.

The **Resample Image** check box should usually remain checked and set to Bicubic. If you are working with print images, deselecting it can sometimes have better results when resizing the image proportionately. Experiment.

Canvas Size

Unlike the Image Size command, which stretches or shrinks an image, the Canvas Size command changes the size of the page — or canvas — on which the image sits. If you increase the size of the canvas, the new area will be filled with the background color. If you make the canvas smaller, your image will be cropped. You can enter a new width or height for your canvas and indicate where you'd like the image to sit inside the new canvas by adjusting the Anchor point. Often you'll increase the canvas size if you want to create a collage of many images in one file, or if you want to add text adjacent to the image.

Orient

If you haven't gotten your image straight using the crop tool, you can orient your image by using the Rotate Canvas command under the Image menu. You can rotate the image 180 degrees, 90 degrees clockwise or counter-clockwise, or choose Arbitrary to insert any number you wish. One word of caution: when you rotate the image, the canvas will adjust itself to be rectangular again. New areas of the canvas will be filled by the background color and often you'll need to be cropped with the crop tool, or select the image with the a marquee tool and choose Crop under the Image menu.

Advanced users with multiple layers in an image can use the Free Transform and Transform tools under the Edit menu to resize, reshape, and reorient images on different layers. They take time to get used to, but they're time savers once mastered.

Repair

Many times after you've scanned an image, you'll see that it looks like it's been dropped behind the refrigerator. Dust, hair, specks, stains, and fingerprints abound. You can get rid of many of them by wiping the photo with a lint-free cloth or cleaning the scanner bed before scanning, but they are often part of the photograph and not even the cleaning lady, can get them out.

If you have areas of a single color that have blemishes, use the eyedropper to select the color next to the blemish and use the painting tools to cover it up. You can also experiment with the Dust and Scratches filter under the Filter>Noise menu at a low radius and threshold, but results are variable. The most useful tool to eliminate these problems is the Clone Stamp.

Clone Stamp

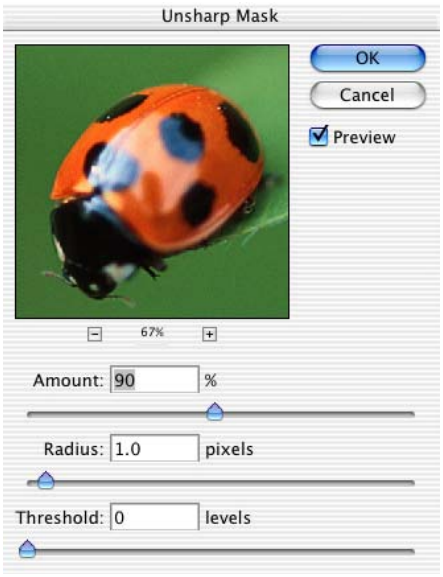
The Clone Stamp tool allows you to clone portions of your image to cover up blemishes and other problem areas that you would like removed. For example, you can use the Clone Stamp to remove scratches from a face by cloning skin or a telephone pole and wires by cloning the sky to cover them up. It takes practice, but it gives great results. To use the Clone Stamp:

1. Click once on the Clone Stamp tool in the toolbox.
2. Hold down the Option {Alt} key and click an area that looks similar to the area around the blemish. You must tell Photoshop which portion of the image you want to clone before you can clone it. If you don't hold down the Option {Alt} key, you'll get an error message telling you so. You want to click on an area that looks similar to the area that contains the blemish because you want it to blend in with the surrounding area.
3. Release the Option {Alt} key and click or drag on top of the blemish. You'll see a cross cursor with the Clone Stamp that shows the area you are cloning from. When you move the stamp, the cross also moves giving you the current reference point. Undo and the History palette are very helpful when using the Clone Stamp because it takes time to get it right.

To change the size or shape of the area being cloned, change brushes in the Brushes palette (Window>Show Brushes). The Clone Stamp Options palette lets you change the opacity of the brush, which often helps the cloned portion to blend in. You can also clone between images if you have them both open by option-clicking in one and dragging the stamp in the other.

Sharpen

Unsharp Mask

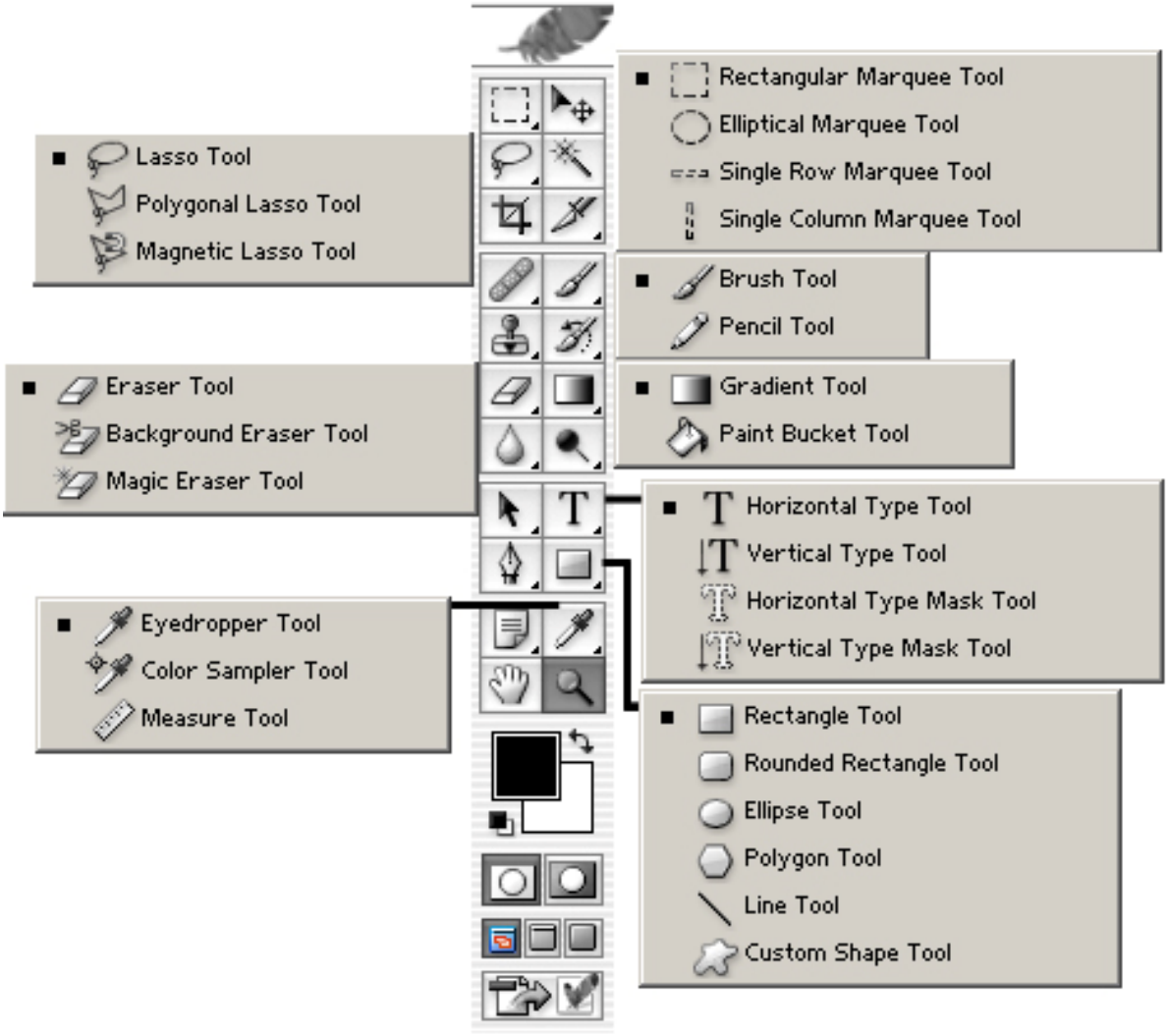


Images often look a little blurry or fuzzy after scanning or resizing. To correct this, you can sharpen the image using the Unsharp Mask command under the Filter>Sharpen menu. That's right, *Unsharp* Mask. Even though it sounds like the opposite of what you want to do, it's the one you want to use. The others don't work nearly as well. Almost all images can be improved using the Unsharp Mask command. Results are subjective, but the ranges below usually work well and the values in the dialog box to the right yields good results.

1. Set the Amount to somewhere between 40-90% by sliding the slider or typing in the numbers. The higher the amount, the more sharpening occurs.
2. Set the Radius to between 1 and 2. This specifies the width of the edge you want to sharpen.
3. Set the Threshold to between 0-4. This determines how different neighboring pixels must be to be considered an edge.
4. Uncheck the Preview button to see the difference Unsharp Mask makes.

You can usually see dramatic results around eyes and leaves. Unsharp Mask is one of those features where you won't notice the improvement in your image until you compare it to the original. Another quick way to preview is to click and hold the mouse button down inside the image preview thumbnail inside the Unsharp Mask dialog box to see the before results, and release the mouse to see the after results.

The Toolbox



The Marquee Tool

In Photoshop, first you select a portion of an image, then you edit, move or duplicate it. Selecting lets you edit a portion of an image independently from other portions.

Selecting a rectangular region

- Use the rectangular marquee. Drag from one corner of the area to the other.
- To select a square region, hold the Shift key down while dragging. To start the square in the middle, hold down Shift-Option {Alt}.
- In the Marquee Options palette (double-click the marquee tool), you can feather edges (makes the outline fuzzy), constrain the aspect ratio of the marquee or define a fixed size for your outline.

Selecting a circular region

- Use the elliptical marquee on the flyout menu of the rectangular marquee. Drag from one corner of the area to the other.
- To select a perfect circle, hold the Shift key down while dragging. To start the circle in the middle, hold down Shift-Option {Alt}.

In the Lasso Options palette (double-click the marquee tool), there are two options: Feather, and Anti-aliased. Feather makes the outline fuzzy. Anti-aliased softens the edge of the outline. Turning off the Anti-aliased option makes the edges of the outline jagged.

Selecting a single row or column

The single row or single column marquees let you define the border as a 1-pixel-wide row or column.

Selecting free-form areas

- Use the lasso tool to trace around the portion of the image you wish to select. It's easy, but sometimes difficult to be exact.
- Use the polygon lasso lets to create a selection with straight sides.
  1. Click to set the starting point of the selection.
  2. Move the cursor to the point where you want the first segment to end.
  3. Keep clicking around the image to create new segments.
  4. When you circle back to the first point, you'll see a little circle next to the cursor. Click to close the selection.
  5. If you want to draw a curved line among your straight segments, hold down the Option {Alt} key.
- The magnetic lasso lets you easily select an image that is a different color than the background. It works best with high-contrast images.
  1. Click on the edge of the portion you wish to select.
  2. Move the cursor around the edge. The magnetic lasso automatically creates an outline with square anchor points.
  3. If the line is off, back up the mouse and try again.
  4. If you need to delete an anchor point, press the delete key. To create an anchor point, click the mouse.

Selecting contiguous areas of color

The magic wand tool lets you select large areas of contiguous, uninterrupted color.

1. Click in an area that is mostly made up of one color. You probably won't be very happy with the results.
2. Open the Magic Wand Options palette by double-clicking the magic wand tool. Tolerance tells Photoshop which colors to select and which not to select. Lower values select fewer colors; higher values select more colors. The Anti-Aliased option softens the edges of the selection. Try turning this option on and off to see the difference.
3. Enter a new tolerance value and press Return.
4. Deselect everything by choosing Deselect from the Select menu.
5. Repeat steps 1 thru 4 until you get it just the way you want it.
6. You can also use the Grow or Similar commands under the Select menu to temporarily increase wand tolerance.

Selecting non-contiguous areas of color

The Color Range command lets you select multiple areas of color at once. It's like the magic wand, but better. It even has something similar to Tolerance, except it calls it "Fuzziness." To use Color Range:

1. Select the eyedropper tool.
2. Click on an area within the area you wish to select. This changes the foreground color and makes it the base color — the color Photoshop uses to judge which other colors it should select.
3. Choose Color Range from the Select menu. The selection Preview box shows your selection in black and white. The white areas are selected, the black areas are not, and the grays are in-between — some of them will be selected, some of them won't.
4. Change the Fuzziness value to adjust the tolerance. Higher values select more colors and vice versa.
5. Click OK when you are done. If it's not what you expected, choose Deselect from the Select menu and start over.

Adjusting selections

- To move the bounding area of your selection, click inside the area and drag it to a new location. Make sure that your selection tool is selected in the toolbox.
- To add to your selection, hold down the Shift key with any of the selection tools.
- To subtract from your selection, hold down the Option {Alt} key with any of the selection tools.

Moving selections

- To move the portion of the image that you have selected around the image window, use the move tool .
- Hold down the Shift key to move your selection straight up or down.
- Hold down the Option {Alt} key while dragging to duplicate your selection.

Inverting Selections

Sometimes it's easier to select what you don't want. For example, if your object is on a white background, try the following:

- Use the Magic Wand to select the white part that surrounds the object.
- Choose Inverse from the Select menu.

Painting Tools

The painting tools in Photoshop allow you to paint colors on your image. Double-click each tool to open the Option palettes where you can change brush modes and opacity settings. You can use the selection tools to select area to be painted. This will prevent you from going outside the lines.

Paintbrush and Pencil

1. The paintbrush paints soft lines like the airbrush. The only difference between the two is that the airbrush paints color continuously even when you hold it in place—as long as the mouse button is down. The paintbrush paints only as you drag the mouse.
2. You can select the size and type of brush you wish to use from the Brush menu on the Info Pallet
3. The Pencil tool works much like the paintbrush tool except that it draws hard-edged lines of any thickness. You can adjust the opacity in the options palette. You can choose the size of the pencil and type of brush from Brush menu on the Info Pallet

Shape Menu

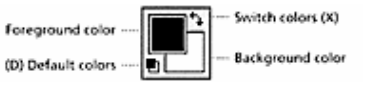
1. The shape menu lets you select and draw geometric shapes
2. The Line tool lets you draw straight lines between two points. Click on the image to set the beginning point, then drag the mouse to the location of the end point and release the mouse. The Info palette allows you to set the line thickness.

Paint bucket

The paint bucket tool fills a continuous area of color with a different color. The paint bucket tool has an opacity option like the other painting tools as well as tolerance and anti-aliased options that are described under the magic wand tool.

Eraser

The eraser tool will erase the parts of the image that you drag it over, but it will paint in the background color, which is typically white. Hence it's not very useful when you can use the paintbrush to do the same thing. The eraser is much more useful when working with an image that has multiple layers. The areas you erase on one layer will reveal areas of the underlying layers.

Color Tools 

The foreground color is applied by the painting tools. The background color is applied by the eraser tool and it is the color of the empty portion of the canvas when increasing Canvas Size. Click the Default Colors icon to restore the foreground color to black and the background color to white. Click the Switch Colors icon to swap the foreground and background colors.

Picking a different color

There are several ways to define the foreground and background colors.

1. Click the foreground or background color icons and select a color from the Color Picker.
2. Open the Color palette (Window>Show Color) and slide the RGB sliders until you get the color you want.
3. Open the Swatches palette (Window>Show Swatches) and click on the color you would like to use. Advanced users can load more swatches (including web-safe colors) from Photoshop's Goodies: Color Palettes folder by clicking the palette menu (the right triangle next to the tabs) in the Swatches palette.
4. Use the eyedropper tool to "lift" colors from other parts of the image. Just click on the color you want to use.

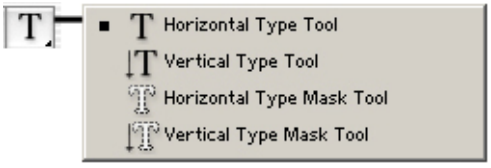
Fill and Stroke

There are two other painting commands that come in very handy, but they aren't located in the toolbox. Instead they are conspicuously hidden under the Edit menu. Both, however, require that at least part of your image be selected.

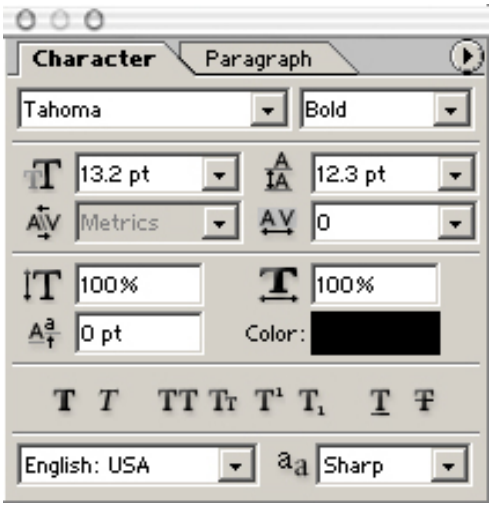
- Fill lets you fill a selection with the foreground or background colors, a pattern, black, gray, or white.
- Stroke traces borders around your selection in the foreground color. You can use Stroke to draw circles and squares. Create a square or circular region with the selection tools, then use Stroke to trace the border with the foreground color.

Adding Text to an Image

Typing Text



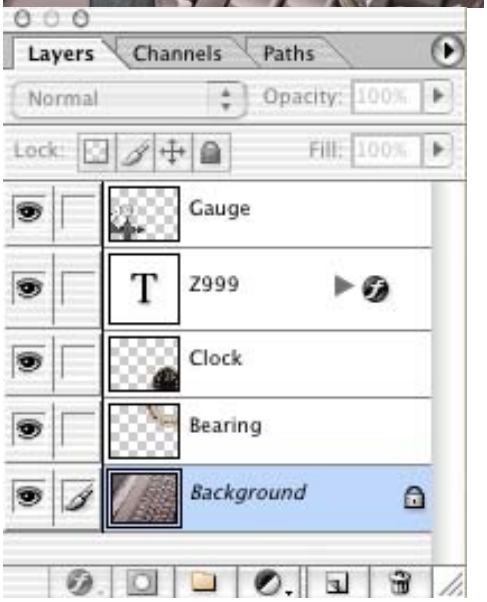
- Select the Type tool and click inside the image. Try clicking somewhere near where you want the text to go, but don't fret. It doesn't really matter where you click because you can move it later.
- When you select the Type tool, the info pallet or the Character pallet allows you to choose your font, size, color and other formatting options.
- Type your text into the document. You can use many of the same features from your word processor: cut, copy, paste, delete key, etc.
- Unlike a word processor, Photoshop will place all words on a single line unless you insert a paragraph by pressing the Return key.
- To move the text around your image, select the layer (Window>Show Layers) that contains your text, then select the move tool and drag the text to a new location.
- To change the font, select the text you wish to change and choose a font from the font menu.
- To change the size, select the text and enter a size into the Size option box.
- To change the color, select the text and click on the color icon. Advanced users can change the color outside the dialog box by choosing a new foreground color, selecting the layer that contains the text, then pressing Option-Delete (Alt-Delete on Windows) to fill with the foreground color.
- Leading controls the amount of space between lines.
- Kerning controls the spacing between two letters. To manually kern, deselect the Auto Kern box.
- Tracking controls the spacing between more than two letters.
- Baseline refers to the distance the type sits from the baseline. You can use it to create superscripts and subscripts.



Type Tools

- The type tool will allow you to add text to your image.
- The type mask tool will create a selection border in shape of the letter you typed. You can then fill the outline with a picture or color.
- The vertical type tools work just like their horizontal counterparts, except the text runs vertically.

Picture using multiple transparencies on an overhead projector. On one sheet, you draw a man's face. On second sheet, you draw a beard. On a third, you draw glasses. You place the transparencies on top of each other and you create a face with a beard, wearing glasses. Photoshop layers work exactly the same way. Layers allow you to separate elements of an image and edit them independently. You combine layers to create a composite image. You rearrange, add, and delete layers or blend them together using different opacity values and blend modes.



Layers Palette

The Layers palette (Window>Show Layers) on the right shows the layers that make up the picture above it.

Showing and hiding layers

The eyeball icon next to the layer name indicates that the layer is visible. To hide the layer, click the eyeball. To show it, click on the eyeball column.

Choosing a layer

To make a layer the active layer, click the its name. The paintbrush icon next to the highlighted layer name indicates that the layer is active. This means that any changes you make will only affect the image on that layer. Another way to choose a layer is to click the image while holding down Control-Option-— the three keys next to the spacebar (Alt-Right click on Windows).

Linking layers

By linking two or more layers, you can merge, align or move their contents together.

Creating a new layer

To create a new layer, click the New Layer icon. You can also choose New Layer from the palette menu, or choose Layer under the Layer>New menu.

Naming a layer

Naming layers is important so that you can keep track of what's where. You can name or rename a layer by double clicking the layer. In the case of text layers, you'll have to select Layer Options from the palette menu or the Layer menu.

Deleting a layer

To delete a layer, drag it to the Trash icon.

Duplicating a layer

To duplicate a layer, drag it to the New Layer icon or choose Duplicate Layer from the palette menu or Layer menu.

Moving layer contents

To move an image on a layer, drag it with the move tool .

Rearranging layers

To rearrange the order of the layers, drag the layer name up or down in the Layers palette. A heavy black line shows where the layer will be inserted. You can't reorder the Background unless you convert it to a layer.

Converting the Background to a layer

To convert the Background to a layer, double click on the Background in the Layers palette, give it a name and click OK. If you hide the Background, you'll see a checkerboard pattern that represents the transparent areas of the visible layers.

Aligning layers

To align layers, link them and select Align Linked from the Layer menu.

Merging layers

There are two ways to merge or combine layers:

- Link them and select Merge Linked from the palette menu or Layer menu.
- Hide all the layers except the ones you want to merge and select Merge Visible from the palette menu or Layer menu.

Changing layer opacity

Photoshop allows you to make layers translucent by entering an opacity value in the Opacity option box or by dragging its attached Opacity slider.

Flattening layers

To flatten the image and merge all visible layers, select Flatten Image from the palette menu or Layer menu.

Copying a layer between documents

Open the source and destination document, select the move tool and drag the layer from the source to the destination. If you hold down the Shift key while dragging the layer will be positioned in the center of the destination image (if the pixel dimensions are different) or in the same position it occupied in the source image (if the pixel dimensions are the same).

Preserving Transparency

To paint only inside the image on a layer and keep the transparent areas transparent, check the Preserve Transparency box near the top of the Layers palette.

Saving a Layered Image

The Photoshop format is the only format that preserves layers. Preserve the layered file for easy editing later.

Exporting a Layered Image

If you want to use your image in a different program, most other programs, do not support layers, so you'll have to flatten your image. Choose the Save a Copy option from the Save menu, select the format you wish to use (TIFF, JPEG, etc) and Photoshop will automatically flatten the layers for you and not overwrite the original (layered) file.

Using Layer Styles

Photoshop CS has made it very easy to add drop shadows, glows and bevels to elements of you image. Layer styles can be applied to regular layers and text layers, but not to Backgrounds.

Adding a Drop Shadow

To apply a soft shadow behind an element:

1. Select a layer.
2. Choose Drop Shadow from the Layer>Layer Styles menu.
3. Adjust the settings in the dialog box as needed.
4. Make sure the Apply box is selected and click OK.

Applying Bevel and Emboss

Bevel and Emboss effects add shadows and highlights to make elements look three-dimensional.

- Applying Bevel and Emboss is just like Applying a Drop Shadow except that you select Bevel and Emboss from the Layer Styles menu.
- You can pretty much leave Highlight and Shadow alone and focus on the bottom of the dialog box.
- Choose a style, Angle, Depth and Blur and watch the results to your image.

Applying other Layer Styles

- To apply Inner Shadow, Our Glow or Inner Glow, follow the same steps as Applying a Drop Shadow, but choose the effect you want from the Layer>Layer Styles menu.

Adjustment Layers

Adjustment layers let you experiment with color and tonal adjustments to an image without permanently modifying it. The color and tonal changes act as a veil through which the underlying layers appear. For more, see Photoshop's online help.

File Formats

When you save an image, the pop-up menu at the bottom of the dialog box contains about ump-teen different formats in which you can save your document. Luckily you don't need to know most of them. The only ones of interest to most are: Photoshop, BMP, CompuServe GIF, Photoshop EPS, JPEG, PICT and TIFF.

Photoshop (native format)

You should use Photoshop's native format if you have multiple layers in your document. All the other formats flatten (merge) the layers together. Keep the master image in Photoshop format and then use the Save a Copy command to save a flattened copy of the image in another format so that you can import it into other programs or put it on the internet.

BMP

BMP is a standard format on Windows computers. It is best for on screen use (in computer based presentations, for example). In general, however, TIFF is more flexible.

CompuServe GIF

GIF is an acceptable format for saving images intended for use on the World Wide Web. The GIF format requires that the image contain 256 colors or less. You can use the Image>Mode>Indexed Color command to reduce the number of colors in your image. Before deciding to use GIF, be sure to read "GIF vs. JPEG" in the *Creating Images for the Web* section of this handout.

Photoshop EPS

For the most part, EPS is used by high-end professionals producing high-end projects with expert color separations from page layout programs. The rest of us might use EPS when importing images to and from Illustrator, FreeHand and CorelDraw, although newer versions of those programs will accept other formats. In general, you can ignore EPS 90% of the time and use TIFF instead.

JPEG

JPEG is one of the most universally accepted formats for viewing images. JPEG supports 24-bit color (millions of colors). The main difference between JPEG and other formats is that is uses a *lossy compression scheme*. What that means is that it loses some data that makes up your image because it stores the image in a compressed format. So why would you ever use it? Well, most of the time, you won't notice what's lost, and it will save you a ton of hard drive space and reduce the file sizes of other documents significantly (such as PowerPoint presentations). This is also one of the reasons that JPEG is so popular on the Internet. It's a great format to use if you aren't doing mission critical stuff, as long as the programs you are using support it. But if you think you may have to edit the file later, keep a master copy in a non-compressed format such as Photoshop or TIFF. When you save an image as in JPEG format, you'll have to choose among two options:

- Quality: For print images, choose Maximum or High if you are short on disk space. For the Web, choose Medium or Low.
- Format: For print, choose Baseline ("Standard"). For the Internet, choose Baseline Optimized. Progressive is also supported on the Web, but it's not as universally accepted.

PICT

PICT formatted images are mostly used for Macintosh graphics that are to be imported into presentation, multimedia, and digital video programs (such as PowerPoint, Macromedia Director, and Adobe Premiere). Later versions of these programs support JPEG which will keep file sizes small with almost no loss of quality at Maximum or High settings.

TIFF

TIFF format is a platform independent standard developed for both Macintosh and Windows programs. When you save an image as a TIFF, Photoshop will ask you which Byte Order you'd like to use: Macintosh or Windows. Choose the platform you work with most. It doesn't matter too much. One platform will read the other's TIFF and vice versa. Avoid checking LZW compression unless you are sure that the program the image is destined for supports it.

GIF vs. JPEG

GIF and JPEG are still the most popular formats to use for images on the Web. But how do you know which one to use?

Rule of thumb

- Use GIF for images that use a lot of flat colors. This includes line drawings, clip art, and most images that are not photographs. GIF stands for Graphics Interchange Format, which is a big hint — the G stands for graphics.
- Use JPEG for photographs. JPEG stands for Joint Photographic Experts Group. The P in JPEG stands for photograph.

Exceptions to the rule

- Graphics that have a lot of shading, texture, or drop shadows often are better saved as JPEGs.
- Photographs that you want to make partially transparent must be saved as GIFs.
- Graphical animations made from photographs must be saved as Animated GIFs. (Photoshop won't create Animated GIFs)

Saving as JPEG

To save images in JPEG format, select Save a Copy under the File menu. For more, see *File Formats* in this handout.

Saving as GIF

Compuserve GIF

You can use the Save As command to save RGB, indexed-color, grayscale, or Bitmap-mode images directly in GIF format..

1. Save the artwork, and choose CompuServe GIF from the Format menu..
2. For RGB images, the Indexed Color dialog box appears. Specify conversion options and click OK.
3. Select a row order for the GIF file, and click OK:
4. Normal displays the image in a browser only when download is complete.
5. Interlaced displays low-resolution versions of the image in a browser as the file downloads. Interlacing makes download time seem shorter, but it also increases file size.

Web-Safe colors

An advanced option for GIFs is to use web-safe colors. Web-safe (or browser-safe) colors won't dither on screen and they are guaranteed to look consistent across browsers and platforms. When adding text or painting lines or colors, it's best to use web-safe colors. Advanced users can load web color swatches from Photoshop's Goodies: Color Palettes folder by clicking the palette menu in the Swatches palette. You can also select the Web palette from the Indexed Color command under Image>Mode to make a graphic web-safe. For more information, see http://www.adobe.com/newsfeatures/palette/.

Making Mistakes and More Photoshop Wisdom

Oops, I goofed

Photoshop is an experimentation program. You try something and if you don't like it, you go back and try something else. And no matter how hard you try, you're bound to make mistakes. Photoshop has several ways to turn the digital clock.

Undo

The Undo command will reverse the effect of the last operation you performed. You can select Undo from the Edit menu, or press -Z (Control-Z on Windows). After you've selected Undo, the command changes to Redo. You can flip back and forth between the current and previous states of the image to decide which you like better.

Revert

The Revert command under the File menu reloads the last saved version of your file. So if you've made many changes to your image and you hate them all, choose Revert to start over entirely.

History Palette

The History Palette (Window>Show History) records all of the operations you have performed on an image and keeps a running list. As you perform each operation, Photoshop gives a name to the current state of the image and displays a small icon that corresponds to the last tool used. To return to a previous state, click on it in the History Palette.

Common Mistakes, Problems, and Remedies

I can't save it as a JPEG, TIFF, etc.

If you have at least one layer in your document, you won't be able to save your image in any format other than Photoshop format. To save it in another format and merge the layers, select Save a Copy from the File menu.

It won't let me paint

Three common problems/remedies:

- You have another portion selected. Photoshop only edits the portion that is selected. Choose Select>Deselect.
- You're on the wrong layer. Open the Layers Palette (Window>Show Layers) and click on the layer you want to edit.
- You have enabled Preserve Transparency and you can't fill in the transparent area. Uncheck it in the Layers Palette.

It won't let me edit

See "It won't let me paint" above.

My selection won't feather

The Feather command doesn't do anything until you copy and paste the selected portion. After using the feather command, copy your selection and paste it into a new document or layer. You can also Select>Inverse and Edit>Fill to color the image while leaving your feathered selection.

I can't paint in color

The image might be in bitmap or grayscale mode. Choose RGB Color from the Image>Mode menu. If it is in Bitmap format, select grayscale first, then RGB.

A Word about Modes

If you've ever looked under the Image>Mode menu, you've noticed the different color modes that images can have. Most of the time, **you'll want your images to be in RGB mode**. The exceptions are:

- You want a black and white image with no grays and harsh edges. Choose Bitmap. You may have to choose Grayscale first, then Bitmap.
- You want a detailed black and white image with a lot of grays. Grayscale gives you the most detail, but again, RGB works fine most of the time.
- You need hundreds of copies of a color image and you want to do traditional offset printing. Use the CMYK format and create color separations. CMYK is another science altogether. For more information, see Photoshop's online help.
- You need to save space, save images in a certain color palette, or save GIF images for the web. Select Indexed color and choose your palette to reduce the number of colors to 256 or fewer. For more information about the GIF format, see the *Creating Images for the Web* section